

REPORT OF RCRA COMPLIANCE INSPECTION

AT

DES MOINES BARREL AND DRUM COMPANY

DES MOINES, IOWA

EPA I.D. NUMBER: Withdrawn

BY

U.S. ENVIRONMENTAL PROTECTION AGENCY
Region VII
Environmental Services Division

INTRODUCTION

At the request of the Air and Waste Management Division (ARWM), a RCRA compliance evaluation inspection was performed at Des Moines Barrel and Drum Company in Des Moines, Iowa, on April 16, 1984. The inspection was conducted under the authority of Section 3007 of the Resource Conservation and Recovery Act (RCRA), as amended. This narrative report and attachments present the results of the inspection.

PARTICIPANTS

Des Moines Barrel and Drum Company:
Virgil C. Smith, President

Iowa Department of Water, Air and Waste Management:
Cynthia Turkle, Environmental Specialist

U.S. Environmental Protection Agency (EPA):
Jo Lynne Moore, Environmental Scientist
John W. Bosky, Environmental Engineer

INSPECTION PROCEDURE

Mr. Virgil C. Smith, proprietor of Des Moines Barrel and Drum Company, was notified on Friday via telephone prior to the inspection to assure his presence during the inspection on Monday. As agreed to during our telephone conversation, I met Mr. Smith in his office, accompanied by Ms. Turkle and Mr. Bosky. I introduced myself, presenting Mr. Smith with my EPA credentials, and introduced Mr. Bosky. I provided Mr. Smith with a RCRA Inspection Confidentiality Notice, which he read and returned to me unsigned, stating that there was nothing confidential about his operations. The inspection consisted of a discussion of process procedures, waste generation and a tour of the facility and surface impoundment.

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PROCESS DESCRIPTION

Des Moines Barrel and Drum operates four days a week, eight hours a day, employing six workers and one semi-trailer driver. The facility recycles and reconditions 200-300 open and closed head drums a day. The number of drums recycled is limited by the resale market. Of all recycled drums, 99% are 55-gallon steel drums. The facility also recycles smaller steel drums, and sells plastic and cardboard drums and drum liners. Mr. Smith regularly receives drums from companies that generate wastes such as ink, varnish, resin and paint.

The reconditioning of a drum consists of a closed head process, an open head process and a painting process. These processes operate independently according to the workload.

Drums that cannot be reconditioned are crushed by the Alter Metal Company and sold as scrap metal.

Closed Head Process

The residue in a closed head drum is removed by placing a steel chain inside the drum and rolling the drum through a caustic solution (pH=9.5). The steel cutting chain is reused as is the caustic solution.

The 80,000-gallon caustic tank is cleaned twice a year by pumping the caustic solution into a holding tank and removing the sludge from the bottom of the tank. The caustic tank is approximately 60'x6', and Mr. Smith estimated that the accumulated sludge is two inches in depth. According to this information, approximately eight 55-gallon drums of sludge would be generated per tank cleaning. Mr. Smith estimated that the cleaning process generated about three 55-gallon drums of sludge "flake" which is disposed by spreading on the facility property (Photograph, frame #10).

As the closed head drums are removed from the caustic bath, they are placed upside down to drain. The caustic solution drains into the tank (Photograph, frame #11).

When the caustic solution has drained from the drum, the drum is physically moved to a flushing area. Sixteen drums are rinsed inside and outside with water. The rinse water drains into a tank under the flushing area. The collection tank is drained daily into a sump which discharges to the city sewer (Photograph, frame #12 and 13).

The insides of the drums are dried, ten at a time, using a vacuum. The water collected in the vacuum also drains to the city sewer via the sump.

The drums are then pressure tested at 10 psi and dried at 450°F in a natural gas oven. The drum is then light tested.

